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Socioeconomics, Population, and Housing Technical Report

Shasta Lake Water Resources Investigation, California

Prepared by:

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Contents

Chapter 1 Affected Environment	1-1
Environmental Setting	1-1
Population and Housing	1-1
Employment and Labor Force	1-14
Business and Industry	1-19
Government and Finance	1-25
Regulatory Framework	1-30
Federal	1-30
State	1-31
Regional and Local	1-31
Chapter 2 Bibliography	2-1
Tables	
Table 1-1. Population Numbers and Projections for Shasta and Tehama Counties and	
California	1_3
Table 1-2. Housing Totals and Characteristics for Shasta and Tehama Counties,	1
1990 – 2006	1-5
Table 1-3. Age, Ethnicity, Income, and Poverty Trends in Shasta and Tehama Counties	1
and California	1-7
Table 1-4. 2006 Population and Housing Data and Projections for Counties of the Lower	1
Sacramento River and Delta	1-10
Table 1-5. Ethnicity, Income, and Poverty Data for Counties of the Lower Sacramento	
River and Delta	1-12
Table 1-6. Labor Force and Employment Totals for Shasta and Tehama Counties	
Table 1-7. Labor Force and Employment Totals for Cities in the Primary Study Area	
Table 1-8. 2005 Employment and Labor Force Data for Counties of the Lower Sacramento)
River and Delta	1-18
Table 1-9. Industrial Makeup in Shasta and Tehama Counties, 2002	1-21
Table 1-10. Projected Growth Industries in Shasta and Tehama Counties	
Table 1-11. Major Employers in Shasta and Tehama Counties, 2005	
Table 1-12. Top Five Industries (Employees by Industry) in Counties of the Lower	
Sacramento River and Delta ¹	1-24
Table 1-13. Revenues and Expenditures in Shasta County – Selected Years, 2007 – 2010	1-27
Table 1-14 Revenues and Expenditures in Tehama County – Selected Vears 2007–2010	

Figures

Figure 1-1. Central Valley Project and State Water Project Service Areas	1-9
Figure 1-2. Unemployment Rates in Shasta County and Tehama County, 1990 – 2005	
Figure 1-3. Unemployment Rates of Cities in the Primary Study Area, 2000 – 2004	. 1-17

Attachments

None.

Abbreviations and Acronyms

CEQA California Environmental Quality Act

CFR Code of Federal Regulations

CVP Central Valley Project

Delta Sacramento-San Joaquin River Delta NEPA National Environmental Policy Act

Reclamation U.S. Department of the Interior, Bureau of Reclamation

SWP State Water Project

USC U.S. Code

Chapter 1 Affected Environment

This chapter describes the affected environment related to socioeconomics for the dam and reservoir modifications proposed under the Shasta Lake Water Resources Investigation. In this context, "socioeconomics" refers to the socioeconomic, population, and housing characteristics of the primary and extended study areas. Topics discussed include current and historic population and housing data, employment and labor force trends, prominent business and industry types, and government and finance.

The area surrounding Shasta Dam and downstream along the Sacramento River, including Shasta and Tehama counties, is generally characterized by a few established urban areas surrounded by primarily rural land uses. Both counties include a primary urban area and a limited number of (two or three) other, much smaller towns and cities. Redding serves as the primary center for development and economic activity in Shasta County; Red Bluff, although much smaller than Redding, plays that role in Tehama County. Land uses transition from low-density rural residential uses along the urban fringe to large tracts of Federally managed land farther out, including the Shasta-Trinity National Forest to the north and Lassen National Forest to the east. As a result, total population and housing numbers in the two counties tend to be comparatively small. Additionally, area residents tend to be demographically similar, with Caucasians making up a large, though decreasing, majority of residents.

Environmental Setting

Several features contribute to the socioeconomic setting of an area: population and housing characteristics, trends in employment and the labor force, the makeup of businesses and local industries, and government and finance characteristics. Collectively, these characteristics (described below) provide a comprehensive view into the existing socioeconomic condition of an area.

Population and Housing

Population, housing, and demographic characteristics represent important pieces of a community's character. Historic and current data characterizing the population, housing, and demographics of potentially affected communities within the study areas are described below. Because of the often wide-ranging, interdependent nature of socioeconomic resources, the following discussion of population and housing characteristics within the primary study area uses the county as the standard geographic level of analysis, rather than differentiating between resources at Shasta Lake and in its vicinity and resources in the upper

Sacramento River area. Using this approach provides a more accurate depiction of existing socioeconomic resources.

Primary Study Area

Population The area surrounding Shasta Dam comprises generally smaller cities and towns with two larger, primary urban areas in each of the two counties (Shasta County and Tehama County). Almost 39 percent of the population in Shasta County and more than 65 percent in Tehama County lived in unincorporated areas in 2006 (Table 1-1). By comparison, only 17.7 percent of the population in the entire state of California lived in unincorporated areas in 2005. Because of the area's limited urbanization, residents in Shasta and Tehama counties live a more rural lifestyle than residents in many other areas of California. In total, the populations of Shasta and Tehama counties make up less than 1 percent of the total population in California.

The cities of Redding and Red Bluff are the two largest urban areas in the primary study area. Redding, with 89,162 residents in 2006, is the most populous city in the region, with almost nine times the population of Anderson, the second largest city in Shasta County (Table 1-1). Red Bluff is the second largest city in the region and the largest city in Tehama County, with 13,529 residents in 2006. Like Redding, Red Bluff serves as the primary urban center of Tehama County. Remaining cities within the primary study area—Anderson, Shasta Lake, and Tehama—all contained fewer than 11,000 residents in 2006.

Although Shasta and Tehama counties are still comparatively small, both counties have grown substantially in the last 15 to 20 years. Since 1990, the population of Shasta County has increased by more than 22 percent (Table 1-1). During that time, the populations of Redding and Anderson (both located along the Sacramento River) increased by approximately 33 percent and 26 percent, respectively. A similar situation has been observed in Tehama County, where the total population has grown by almost 23 percent since 1990. Most of this new growth has occurred in the unincorporated areas of Tehama County, rather than in existing cities. The percentage of the population in the unincorporated area has decreased in Shasta County, but the reverse trend has been observed in Tehama County (Table 1-1).

Shasta and Tehama counties are expected to continue this growth trend, with substantial growth in Tehama County. The State of California projects that Shasta County's population will increase by 86 percent by 2050 to approximately 332,000 residents (DOF 2007a). This increase is approximately 26 percent higher than expected at the state level (60.0 percent) (Table 1-1). An even larger population increase is expected in Tehama County, where the population is expected to more than double between 2006 and 2050.

Table 1-1. Population Numbers and Projections for Shasta and Tehama Counties and California

		Histo	Historic/Current Trends	Trends			Proje	Projections	
Location	1990	1995	2000	2006	Percent Change 1990–2006	2010	2030	2050	Percent Change 2006–2050
Shasta County	147,036	159,400	163,256	179,835	22.3	191,722	224,386	331,724	86.1
Redding	66,462	76,900	80,865	89,162	34.2	* *	* *	*	NA
Anderson	8,299	8,725	9,022	10,580	27.5	* *	* *	*	NA
Shasta Lake	*	8,975	800'6	10,230	14.0*	* *	* *	* *	NA
Unincorporated (%)	49.2	40.7	39.4	38.8	-10.4	* *	* *	*	A
Tehama County	49,625	54,200	56,039	60,979	22.9	65,593	79,484	124,475	104.1
Red Bluff	12,363	13,150	13,147	13,535	9.4	* *	* *	*	NA
Tehama	401	430	432	434	8.2	* *	* *	*	NA
Unincorporated (%)	62.5	63.2	63.7	65.1	2.6	* *	* *	*	NA
State of California	29,758,213	31,617,000	33,871,648	37,195,240	24.9	39,135,676	44,135,923	59,507,876	0.09
Unincorporated (%)	20.7	19.6	18.7	17.7	3.0	* *	*	*	NA

Sources: DOF 2007a, 2007b, 2007c

percent change calculated from 1995 totals

NA = not applicable

Housing As would be expected, provision of housing in the primary study area generally coincides with the population trends discussed above. Shasta County (75,240 units in 2006) maintains almost three times the amount of housing units in Tehama County (25,881 units) (Table 1-2). Of the cities in the region, Redding provides the largest supply of housing, with more than 37,000 housing units. Redding's units represent roughly half the total housing units in Shasta County. Red Bluff provides the second largest housing stock in the area, with almost 6,000 units. In almost all of the jurisdictions highlighted in Table 1-2 (with the exception of Red Bluff and Tehama), the increase in housing units between 1990 and 2006 was roughly equal to or greater than the percentage increase at the state level (17.5 percent). Redding observed the greatest increase in housing units since 1990 (35.9 percent).

In addition to housing unit data, Table 1-2 also lists useful descriptors that characterize housing in the area: the percentage of single-family dwellings, vacancy rates, and average household size. Overall, single-family dwelling units are the predominant housing type in the primary study area. Single-family uses composed more than 59 percent of the housing units in all the jurisdictions listed in Table 1-2 (except for the entire state of California). All of the localities listed in the table currently have more single-family housing units as a percentage of the total housing stock than observed at the state level in 2006 (57.3 percent). Vacancy rates were generally higher than the state average (5.9 percent), with the exception of Redding (5.0 percent) and Anderson (5.8 percent). Tehama County registered the highest vacancy rate in the primary study area, with 10.8 percent of all housing units vacant. The average household size in jurisdictions of the primary study area ranged from as low as 2.39 persons per household (Tehama) to as high as 2.66 persons per household (Anderson and Shasta Lake) (Table 1-2). All of these totals were lower than the average persons per household at the state level (2.94 persons).

Using the projected populations for Shasta and Tehama counties in the previous section and the average household sizes included in Table 1-2, the future demand for housing in the primary study area can be estimated (assuming a constant average household size). With 331,724 residents by 2050 (approximately 152,000 new residents), Shasta County will require approximately 59,800 new housing units. During that same time, Tehama County will need an additional 24,400 new units to house the county's 63,500 new residents.

Table 1-2. Housing Totals and Characteristics for Shasta and Tehama Counties, 1990 – 2006

			Trends			чo	Characteristics (2006)	s (2006)
Location	1990	1995	2000	2006	Percent Change, 1990–2006	Single Family (%)	Vacancy (%)	Average Persons per Household
Shasta County	60,552	68,091	68,810	75,240	24.3	68.2	7.8	2.54
Redding	27,238	32,164	33,802	37,020	35.9	2.59	2.0	2.47
Anderson	3,234	3,435	3,581	4,169	28.9	64.1	5.8	2.66
Shasta Lake	*	3,603	3,767	4,204	16.7*	0.67	0.6	2.66
Tehama County	20,403	22,7120	23,547	25,881	26.8	61.1	10.8	2.60
Red Bluff	5,062	5,358	2,567	5,787	14.3	0.65	8.2	2.45
Tehama	176	183	196	199	13.1	85.4	8.5	2.39
State of California	11,182,513	11,758,521	12,214,550	13,140,388	17.5	57.3	6:5	2.94

Sources: DOF 2007b, 2007c

percent change calculated from 1995 totals

Age, Ethnicity, and Income/Poverty In addition to population and housing trends, the demographic profile is useful in characterizing a given area and identifying potential issues. This section of the document reviews three key demographic parameters within the primary study area: age, race and ethnicity, and income and poverty.

Age From the most recent data for age distribution, a shift in the makeup of residents, consistent with both statewide and national trends, can be observed in the primary study area. As shown in Table 1-3, the population of Shasta and Tehama Counties aged between 2000 and 2005. In both counties, the number of 45- to 64-year-olds increased by at least 1 percent, while the population in most other age groups decreased (except for 20- to 44-year-olds in Tehama County). This trend was also observed for the state as a whole (with an increase of 2.7 percent of 45- to 64-year-olds) and can be attributed to the aging of the socalled "baby boomers." Over the 5-year period, Shasta County experienced a slight decrease (0.3 percent) in the number of senior citizens and Tehama County experienced only a very small increase (0.1 percent). Decreases in the number of young people (under 19 years of age) in the two counties were larger (decreases of 1.8 percent and 2.0 percent, respectively) than the rate of the state as a whole (decrease of 0.3 percent). Interestingly, the decrease in the 20- to 44year-old age group in Shasta County was substantially less (0.4 percent) than in the state as whole (2.4 percent), while the 20- to 44-year-old group increased in Tehama County (by 1.1 percent) between 2000 and 2005.

Race/Ethnicity The racial and ethnic makeup of the primary study area (Table 1-3) depicts a historically white population that is slowly diversifying. In 2005, the white population still represented the large majority (more than 83 percent) of the populations of Shasta and Tehama counties, but substantial increases were observed in many minority groups (U.S. Census Bureau 2006a, 2006b). For example, between 2000 and 2005, Shasta County saw overall increases in the black or African American, American Indian, and Asian or Pacific Islander groups, with population increases of 5.5 percent, 8.3 percent, and 28.1 percent, respectively (Table 1-3). These increases compared to a 7.0 percent increase in the county's white population. Similarly, Tehama County's minority populations increased between 2000 and 2005. The largest increases were observed in Tehama County's Hispanic population, with an increase of approximately 21 percent. The population of individuals identifying themselves as multiracial also increased substantially (19.3 percent) between 2000 and 2005. Trends observed in the two counties generally coincide with statewide trends, where Hispanic, Asian-Pacific Islander, and American Indian populations all grew by more than approximately 12 percent over the 5-year period.

Table 1-3. Age, Ethnicity, Income, and Poverty Trends in Shasta and Tehama Counties and California

	Торіс	Shasta County	Tehama County	State of California
	19 years or below (% change), 2000–2005	-1.8	-2.0	-0.3
Age	20 to 44 years (% change), 2000–2005	-0.4	1.1	-2.4
ď	45 to 64 years (% change), 2000–2005	2.5	1.3	2.7
	65 years+ (% change), 2000–2005	-0.3	-0.4	0.1
	White, 2005	153,771	46,375	16,408,477
	White, 2000 – 2005 (% change)	7.0	4.6	1.7
	Black or African American, 2005	1,278	313	2,255,281
	Black or African American, 2000 – 2005 (% change)	5.5	2.9	1.6
≥	American Indian, including Alaskan Natives, 2005	4,477	1,077	215,044
Race/Ethnicity	American Indian, incl. Alaskan Natives, 2000–2005 (% change)	8.3	4.2	13.5
ace/	Asian or Pacific Islander, 2005	4,600	514	4,393,010
a a	Asian or Pacific Islander, 2000–2005 (% change)	28.1	1.4	11.9
	Two or more races (total), 2005	5,054	1,468	779,784
	Two or more races (total), 2000 – 2005 (% change)	18.7	19.3	18.3
	Hispanic Origin (any race), 2005	10,302	11,207	12,905,840
	Hispanic Origin (any race), 2000 – 2005 (% change)	11.8	21.1	14.3
	Median Household Income, 2000	\$34,335	\$31,206	\$47,493
	Median Household Income, 2005	\$42,227	\$34,520 ¹	\$53,629
_	% Change, 2000–2005	23.0	10.6	12.9
vert	% of Individuals Below Poverty Level, 2000	15.4	17.3	14.2
e/Pc	% of Individuals Below Poverty Level, 2005	13.2	14.5 ¹	13.3
Income/Poverty	% Change, 2000–2005	-2.2	-2.8	-0.9
<u> </u>	% of Children (< 18) Below Poverty Level, 2000	21.0	24.0	19.0
	% of Children (< 18) Below Poverty Level, 2005	19.6	21.7 ¹	18.6
	% Change, 2000–2005	-1.4	-2.3	-0.4

Sources: U.S. Census Bureau 2002a, 2002b, 2002c, 2006a, 2006b

Note

¹ Because of limited data availability, income/poverty data for Tehama County are for 2004.

Income/Poverty Overall, jurisdictions within the primary study area have underperformed when compared to the state averages for income levels and poverty rates. Median household incomes in Shasta and Tehama counties were sizably lower than the state average in 2000 and 2005, although Shasta County experienced a substantial increase in incomes in the 5-year period (Table 1-3). With median household incomes of \$42,227 and \$34,520 in 2005 and 2004, respectively, incomes in Shasta and Tehama counties averaged between \$11,000 and \$19,000 less than state's 2005 average. The increase in average median household income between 2000 and 2005 was greater in Shasta County than the state average (23.0 percent and 12.9 percent, respectively). Between 2000 and 2004, median household income in Tehama County increased by almost 11 percent.

Overall poverty rates and child poverty rates have also been higher in the primary study area than the state as a whole. In both 2000 and 2005, poverty rates in Shasta and Tehama counties were generally higher than the state average, but in 2005 Shasta County's poverty rate was roughly equal to that observed at the state level (Table 1-3). Child poverty rates were more than 20 percent in both counties in 2000, but these rates have since been reduced. Still, poverty rates in both counties are higher than the state average.

Extended Study Area

The extended study area is separated into two subareas: (1) the lower Sacramento River and Sacramento-San Joaquin River Delta (Delta); and (2) the Central Valley Project/State Water Project (CVP/SWP) service areas. The first subarea is composed primarily of a nine-county area extending from southern Tehama County, just south of the project area, to San Joaquin County, located in the southern Delta. Because of the broad expanse of the CVP and SWP service areas (Figure 1-1), in terms of socioeconomic effects the second subarea is generally synonymous with the entire state of California. Either the CVP or SWP serves, to some degree, residents in 36 of California's 58 counties. These 36 counties accounted for almost 91 percent (33,811,279 residents) of California's population in 2006. Therefore, in the analysis below, the socioeconomic data for the state is used to characterize the CVP/SWP service area. Each subarea is discussed separately below.

Lower Sacramento River and Delta Socioeconomic resources for the lower Sacramento River and Delta area can generally be characterized by a nine-county area that covers the majority of the northern portion of the Central Valley. This nine-county area includes Butte, Colusa, Contra Costa, Glenn, Sacramento, San Joaquin, Solano, Sutter, and Yolo counties.

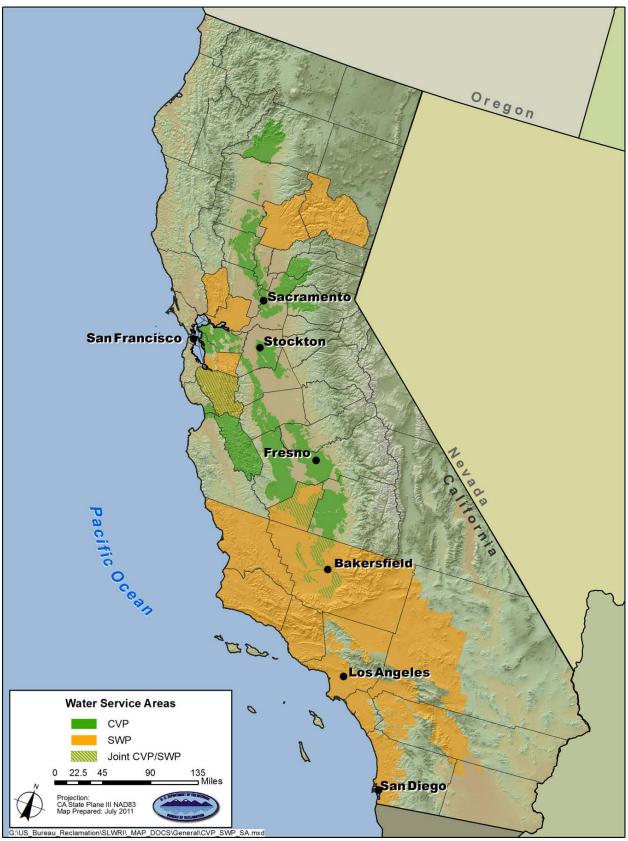


Figure 1-1. Central Valley Project and State Water Project Service Areas

Table 1-4. 2006 Population and Housing Data and Projections for Counties of the Lower Sacramento River and Delta

					County					Nine-	Ctata of
Location	Butte	Colusa	Contra Costa	Glenn	Sacramento	San Joaquin	Solano	Sutter	Yolo	County Area	State of California
Total Population, 2006	215,981	21,501	1,030,732	28,475	1,387,771	668,259	421,542	91,669	190,500	4,056,430	37,195,240
2010 Projected Population	230,116	23,787	1,075,931	30,880	1,451,866	741,417	441,061	102,326	206,100	4,303,484	39,135,676
2030 Projected Population	281,442	29,588	1,237,544	37,959	1,622,306	965,094	503,248	141,159	245,052	5,063,392	44,135,923
2050 Projected Population	441,596	41,662	1,812,242	63,586	2,176,508	1,783,973	815,524	282,894	327,982	7,745,967	59,507,876
Percent Change, 2006–2050	104.5	93.8	75.8	123.3	56.8	167.0	93.5	208.6	72.2	80.0	60.0
Total Housing Units, 2006	93,383	7,587	387,331	10,522	535,788	219,717	149,193	32,472	70,542	1,506,635	13,140,388
Percent Single- family	64.0	77.5	74.4	71.4	70.5	77.0	76.0	76.7	64.6	72.5	57.3
Vacancy	6.7	9.8	3.0	8.1	4.3	3.9	3.6	4.5	3.5	4.0	5.9
Average Persons/ household	2.40	3.08	2.71	2.90	2.66	3.08	2.82	2.91	2.67	2.74	2.94

Sources: DOF 2007a, 2007b

Population Roughly 4 million people live in the nine-county area (Table 1-4). This population represents approximately 11 percent of the total state population (approximately 37 million residents). Sacramento County and Contra Costa County are the two largest counties in the area, with approximately 1.4 million and 1.0 million residents, respectively, in 2006 (DOF 2007b). These two counties are substantially larger than the third largest county, San Joaquin County (668,529 residents). The smallest county in the area was Colusa County, with only 21,501 residents in 2006.

In addition to current population estimates, Table 1-4 shows population projections for each of the nine counties in the lower Sacramento River and Delta area and for the area as a whole. Of the nine counties in the area, only Sacramento County (56.8 percent) is expected to grow at a slower rate than the state of California (60.0 percent increase) between 2006 and 2050. Population increases of at least 72 percent are expected in all other counties in the area over that time. Sutter and San Joaquin counties are expected to experience the

highest growth rates between now and 2050, with increases of approximately 209 percent and 167 percent, respectively (DOF 2007a). The populations of Glenn and Butte counties are also expected to more than double over that time (Table 1-4). In total, the population of the nine-county area is expected to increase by approximately 80 percent. This high rate of growth is expected to alter the existing character of many of these counties by making them more urban (i.e., with higher density housing and increased demand for public services).

Housing Housing characteristics in the nine-county area that makes up the lower Sacramento River and Delta are generally similar to those at the state level, with some variation. In 2006, the nine-county area contained approximately 1.5 million housing units (Table 1-4). As with the population numbers, this total represents approximately 11 percent of the state's housing stock (approximately 13 million houses). Overall, single-family housing makes up a larger proportion of the total housing stock in the nine-county area (72.5 percent) than recorded at the state level (57.3 percent) in 2006 (DOF 2007b). No county in the area registered a lower percentage of single-family housing than the state as a whole. The county with the lowest proportion of single-family units is Butte County with 64 percent of its total housing stock being single-family units (Table 1-4).

The vacancy rate in the nine-county area in 2006 was lower (4.0 percent) than the rate observed at the state level (5.9 percent). The vacancy rate in the majority of counties (six of nine) within the lower Sacramento River and Delta area was substantially lower than in the state as a whole (DOF 2007b). Only Butte County (6.7 percent), Glenn County (8.1 percent), and Colusa County (9.8 percent) had higher vacancy rates than the state. Contra Costa County had the lowest vacancy rate in the area, with three percent of housing units vacant in 2006 (Table 1-4).

Average household size in the lower Sacramento River and Delta area is generally lower than that observed at the state level. In total, an average of 2.74 persons lived in the households of the nine-county area in 2006 (Table 1-4). This compared to an average of 2.94 persons for the entire state (DOF 2007b). Households in Butte County (2.40 persons) were the smallest, on average, in the nine-county area, while Colusa and San Joaquin counties had the largest household size (3.08 persons) in 2006.

Race/Ethnicity Racial and ethnic characteristics in the nine-county area are presented in Table 1-5. Overall, the majority of people in the area are white (53.0 percent), but the proportion of population identified as white varies substantially between counties in the area. The white population of Butte County (79.1 percent) in 2005 was the highest proportion of any county in the area, while San Joaquin County had the lowest proportion of white residents (42.9 percent) (DOF 2007b). These proportions are still generally higher than that observed at the state level in 2005 (44.4 percent). In all of the counties of

the lower Sacramento River and Delta, the Hispanic population represented the second largest population, ranging from 12.0 percent in Butte County to 49.2 percent in Colusa (Table 1-5). These percentages compared to the 34.9 percent of the state population identified as Hispanic. When compared to the state as a whole, San Joaquin (6.6 percent), Contra Costa (8.5 percent), Sacramento (9.3 percent), and Solano (13.0 percent) counties all registered a higher percentage of African-Americans than at the state level (6.1 percent). Overall, 8 percent of the population of the nine-county area was African-American in 2005 (DOF 2007b). No other sizeable variations in minority populations were observed between the state level and county level.

Table 1-5. Ethnicity, Income, and Poverty Data for Counties of the Lower Sacramento River and Delta

						County					Nine-	State of
		Butte	Colusa	Contra Costa	Glenn	Sacramento	San Joaquin	Solano	Sutter	Yolo	County Area	State of California
	White, %	79.1	45.6	55.2	61.1	53.6	42.9	47.1	55.6	55.2	53.0	44.4
	Black/African American, %	1.3	0.5	8.5	0.5	9.3	6.6	13.0	1.7	2.1	8.0	6.1
200	American Indian (incl. Alaskan Natives), %	1.8	1.6	0.4	1.7	0.7	0.7	0.6	1.1	0.7	0.7	0.6
e/Ethnicit	Asian or Pacific Islander, %	3.3	1.8	12.3	3.5	12.9	13.6	14.9	12.5	10.8	12.3	11.8
Rac	2 or more races (total), %	2.5	1.3	2.3	1.8	4.1	2.5	4.5	2.0	2.7	3.2	2.1
	Hispanic Origin (any race), %	12.0	49.2	21.1	31.5	19.3	33.8	19.9	27.2	28.6	22.7	34.9
	Median Household Income, 2006	\$40,897	\$38,350*	\$74,241	\$34,883*	\$53,930	\$51,951	\$61,533	\$51,688	\$51,128	**	\$53,629
ome/Poverty	% of Individuals Below Poverty Level, 2006 % of Children	16.4	11.7*	7.9	14.4*	12.0	14.2	10.8	12.5	17.8	**	13.3
oul	% of Children (<18) Below Poverty Level, 2006	17.5	16.7*	9.8	21.1*	16.7	19.3	15.2	16.9	18.2	**	18.6

Sources: U.S. Census Bureau 2007a, 2007b, 2007c, 2007d, 2007e, 2007f, 2007g

Notes

^{* =} Because of data limitations, these estimates are for 2004.

^{** =} No data available.

Income/Poverty Generally, income and poverty characteristics for the lower Sacramento River and Delta area are similar to those for the state as a whole. As shown in Table 1-5, the median household income of the majority of counties within the nine-county area is similar to or higher than the statewide median household income (\$53,629). Contra Costa County registered the highest median household income in the nine-county area, with more than \$74,000, while Butte County recorded the lowest median household income, with approximately \$41,000 (U.S. Census Bureau 2007a). Butte County was the only county in the area with a household income substantially lower than the state median household income.

Similar to household income, poverty levels for both individuals and children in the counties of the lower Sacramento River and Delta were similar to those at the state level. San Joaquin (14.2 percent), Butte (16.4 percent), and Yolo (17.8 percent) counties had higher overall poverty rates than California as a whole (13.3 percent) in 2006 (Table 1-5). The remaining counties in the area registered lower poverty rates, with Contra Costa County (7.9 percent) maintaining the lowest poverty rates in the area (U.S. Census Bureau 2007b). Child poverty rates in the counties of the lower Sacramento River and Delta were lower than the state in all cases except one. Approximately 19 percent of children in San Joaquin County were living below the poverty level in 2006, compared to 18.6 percent in the entire state.

CVP/SWP Service Areas In 2006, the state of California contained 37,195,240 residents. Approximately 80 percent of the state's population resides in the incorporated areas of its 58 counties (DOF 2007b). Similar to the state as a whole, most of the population of the CVP and SWP service areas is concentrated within urban areas. The CVP and SWP service areas includes such prominent municipal and industrial water contractors as the Contra Costa Water District, Santa Clara Valley Water District, Alameda County Water District, and water districts that serve portions of the Sacramento and Stockton metropolitan areas. Outside of these fast-growing population centers, most of the CVP and SWP service areas are rural in nature, with irrigated agriculture being the predominant land use and driver of the local and regional economies.

As California's population has continued to grow at a notable pace, water and power supplies have become increasingly scarce and expensive, and existing supplies have therefore become more valuable. This trend is expected to continue. As shown in Table 1-1, the state's population has increased by almost 25 percent since 1990 and is projected to increase by approximately 60 percent to over 59 million people by 2050. This substantial population increase will result in a sizeable increase in water and energy demand across the state. With this population growth, the continued diversification of the state would be expected. The proportion of the statewide population made up of minority groups has been steadily increasing. Almost all of the minority groups identified in Table 1-2 (except Black or African-American) experienced double-digit population growth between 2000 and 2005 (U.S. Census Bureau 2002b, 2006b).

Hispanics are the largest minority population in California, and many members of this ethnic group work on farms that receive some or all of their water from the CVP and SWP. In general, rural agricultural counties typically have smaller minority populations than the urban counties.

Poverty levels for both individuals and children in California decreased slightly between 2000 and 2005. This trend is not expected to continue indefinitely. Instead, the percentage of people below the poverty level is expected to follow national and statewide economic trends. Generally, poverty rates tend to be higher in the state's rural counties than in the urban counties. Despite these overall urban and rural differences, each of the state's major urban areas has pockets of low-income neighborhoods with high poverty rates.

Employment and Labor Force

Trends in employment and the labor force represent key considerations within rural communities like those in the primary study area. Because of the prevalence of numerous resource-dependent businesses in most rural areas, many rural communities often struggle to adapt to the challenges of an increasingly global marketplace. As the role of natural resource—based industries and agriculture diminishes, employment opportunities in rural areas become more difficult to obtain as the economy transitions. Based on unemployment trends in Shasta and Tehama counties, the economy of the primary study area appears to be in such a transition. At the same time, agriculture and its related support activities remain comparatively strong and provide employment opportunities in the remainder of the CVP and SWP service areas.

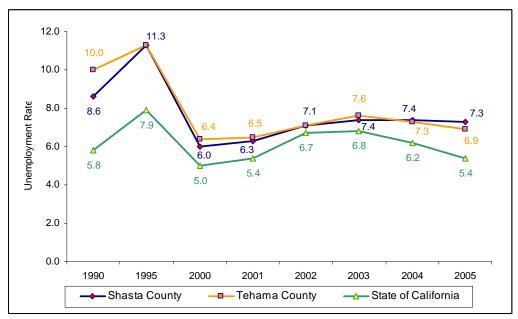
This section describes the employment and labor force characteristics in the study areas that could be affected by the project. Like the "Population and Housing" section above, the analysis of the primary study area focuses primarily on Shasta and Tehama counties. Individual cities within the two counties are discussed where data are available. The analysis of the extended study area speaks more generally about employment and labor force conditions in the broader area.

The data presented in this section reflect conditions that existed before the U.S. recession that began in late 2007 and became apparent beginning in 2008. Changes to the California and U.S. economies attributable to the recession resulted in increases in unemployment rates statewide; therefore, actual unemployment rates in the study area are now generally higher than presented in this section. This section uses the pre-recession figures to reflect economic conditions that were current in 2005, when the notice of intent for the SLWRI was released. Using these earlier figures does not affect the conclusions in the environmental impact analysis presented in the EIS (except that with a higher unemployment rate, employment generated by project construction could result in a greater benefit to the local economy).

Primary Study Area

Employment and labor force indicators provide useful insight into the economy of an area. Because of the role of Shasta Dam in the surrounding area and the entire state of California, developing a clear understanding of the workforce conditions in the primary study area helps to identify potential impacts associated with each project alternative. To that end, the following sections describe recent employment trends in the primary study area.

Shasta and Tehama Counties Since 1990, employment rates in Shasta and Tehama counties have consistently been below the state average. Because of the cyclical nature of the area's natural resource–related industries and other factors, Shasta and Tehama counties were characterized by substantially higher unemployment rates during the 1990s (Shasta County 2004). Unemployment in both counties peaked at 11.3 percent in 1995, compared with an unemployment rate of 7.9 percent for the state as a whole at that time (Figure 1-2). Since then, unemployment rates in both counties have decreased substantially and converged, to some extent, with state rates. Since 2000, unemployment rates in the two counties have ranged between 0.4 percent and 1.9 percent above the statewide rate (Figure 1-2). The two counties recorded the same unemployment rate (7.1 percent) in 2002 and have hovered near that total since. In 2005, Tehama County registered a 7.3 percent unemployment rate, while unemployment in Shasta County totaled 6.9 percent of the population.



Sources: EDD 2006a

Figure 1-2. Unemployment Rates in Shasta County and Tehama County, 1990 – 2005

Table 1-6 displays the total labor force within each jurisdiction over the past 4 years. As a result of its larger population, Shasta County maintained a labor

force of just under 83,000 people in 2005, or more than three times that of Tehama County. Since 2002, the total labor force in Shasta County has increased by approximately 1,300 individuals, with slight variation from year to year. Between 2002 and 2005, the labor force of Tehama County generally remained around 25,600 individuals.

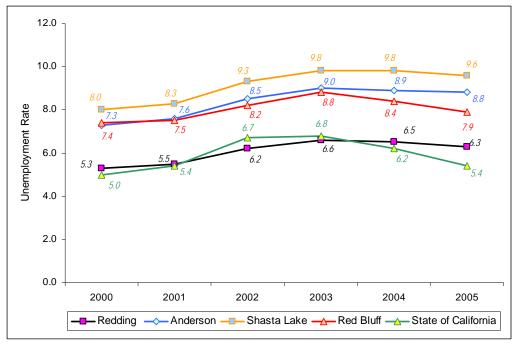
Table 1-6. Labor Force and Employment Totals for Shasta and Tehama Counties

	2	2002	2	2003	2	004	2	2005
	Labor Force	Employment	Labor Force	Employment	Labor Force	Employment	Labor Force	Employment
Shasta County	81,400	75,700	82,800	76,700	83,600	77,400	82,700	76,700
Tehama County	25,600	23,770	25,800	23,840	25,470	23,620	25,600	23,800
State of California	17,326,900	16,165,100	17,414,000	16,223,500	17,552,300	16,459,900	17,740,400	16,782,300

Sources: EDD 2006a

Nearby Cities Recent unemployment rates in the cities of Shasta and Tehama counties have generally exceeded those recorded at the county level. While unemployment rates have been hovering between 7 percent and 7.5 percent in the counties, unemployment rates have generally been above 8.5 percent in the cities of these two counties (Figure 1-3). The city of Shasta Lake has consistently maintained comparatively high unemployment rates, topping out at 9.8 percent in both 2003 and 2004. Red Bluff and Anderson have also registered relatively high rates in the last 3 years, with over 7.9 percent unemployment in each year. Redding represents an exception to the high unemployment rates recorded in other nearby cities. Redding has maintained a lower unemployment rate than both Shasta and Tehama counties in the last 4 years (Figure 1-2). Unemployment in the city has stayed at or below 6.6 percent in all 4 years and is generally similar to the statewide unemployment rate.

Total labor force and employment in the four cities included in Figure 1-3 are presented in Table 1-7. Since 2002, an overall increase in labor force has been observed in all of the jurisdictions of Shasta County, while Red Bluff has been comparatively stagnant over that period. Of the three cities in Shasta County, only Redding has experienced steady growth from year to year. Anderson and Shasta Lake have increased slightly in some years but also had years with no growth at all. Interestingly, Red Bluff experienced a decrease in the total labor force between 2002 and 2004. (These minor changes may be because of rounding.)



Source: EDD 2006b

Figure 1-3. Unemployment Rates of Cities in the Primary Study Area, 2000 – 2004

Table 1-7. Labor Force and Employment Totals for Cities in the Primary Study Area

	2	2002	2	2003	2	2004	2	2005
	Labor Force	Employment	Labor Force	Employment	Labor Force	Employment	Labor Force	Employment
Shasta Cour	nty							
Redding	41,400	38,800	42,100	39,300	42,500	39,700	41,800	39,200
Anderson	4,300	3,900	4,400	4,000	4,400	4,000	4,400	4,000
Shasta Lake	4,300	3,900	4,300	3,900	4,400	4,000	4,300	3,900
Tehama Cou	inty							
Red Bluff	6,200	5,700	6,200	5,700	6,100	5,600	6,200	5,700
Tehama	**	**	**	**	**	**	**	**
State of California	17,326,900	16,165,100	17,414,000	16,223,500	17,552,300	16,459,900	17,740,400	16,782,300

Source: EDD 2006b

Key:

^{** =} no data available

Extended Study Area

Employment and labor in the extended study area generally follow the trends observed in the primary study area. Most counties' employment and labor characteristics are similar to those for the state as a whole, and a few counties experienced higher unemployment levels in 2005. More detailed information on each subarea is provided below.

Lower Sacramento River and Delta Overall, employment and labor trends in the nine counties of the lower Sacramento River and Delta are generally consistent with statewide trends. The area maintains a labor force of more than 1.9 million people, representing approximately 11 percent of the labor force of the state of California (17.7 million). In 2005, Sacramento County maintained the largest labor force of the nine counties, with more than 680,000 people (Table 1-8). Colusa County, with only 9,800 people, maintained the smallest labor force.

Table 1-8. 2005 Employment and Labor Force Data for Counties of the Lower Sacramento River and Delta

					County					Nine-	State of
	Butte	Colusa	Contra Costa	Glenn	Sacramento	San Joaquin	Solano	Sutter	Yolo	County Area	California
Employment	94,800	8,600	496,300	10,800	650,300	266,400	202,100	37,400	89,800	1,856,500	16,782,300
Labor Force	101,100	9,800	518,500	11,700	682,600	287,800	212,400	41,100	94,700	1,959,700	17,740,400
Unemployment Rate	6.2	12.6	4.3	8.0	4.7	7.4	4.8	8.9	5.2	5.3	5.4

Source: EDD 2006a

In the nine-county area in 2005, approximately 5.3 percent of the labor force was classified as unemployed (Table 1-8). This unemployment rate compared to a statewide total of 5.4 percent for the same period. Although the total unemployment rate was similar to the state's unemployment rate, unemployment within the counties of the lower Sacramento River and Delta varied substantially. Five counties – Butte, San Joaquin, Glenn, Sutter, and Colusa – registered higher unemployment rates than the state as a whole in 2005, with rates of 6.2, 7.4, 8.0, 8.9, and 12.6 percent, respectively (EDD 2006b). As shown in Table 1-8, the three counties with the highest unemployment rate (Colusa, Glenn, and Sutter) also maintained the three smallest labor forces within the area. The remaining four counties registered unemployment rates below state levels, with Contra Costa County registering the lowest unemployment rate (4.3 percent) in 2005.

Generally, the counties with the highest unemployment rates in 2005 were characterized by greater dependence on the agricultural industry and a reduced industrial diversity (see the "Business and Industry" section below for more

information). Four of the five counties with unemployment rates above the statewide average maintained more than 60 percent of their land mass in agricultural production (DOF 2007d, 2007e, 2007f, 2007g, 2007h). Frequently, unemployment rates tend to be higher in rural areas than in urban areas and farm workers commonly have seasonal and temporary jobs.

CVP/SWP Service Areas Employment and labor force trends observed in the CVP and SWP service areas are generally synonymous with the trends observed at the state level because of the expanse of the CVP and SWP service areas. In the discussions of the primary and extended study areas, trends at the state level have been discussed at length. Therefore, this section provides a brief summary of recent statewide trends in employment and labor force. (As stated previously, the data presented in this section reflect conditions that existed before the U.S. recession that began in late 2007 and became apparent beginning in 2008. This section uses the pre-recession figures to reflect economic conditions that were current in 2005, when the notice of intent for the SLWRI was released.)

As illustrated in Table 1-7, California's total labor force increased consistently from year to year between 2002 and 2005. In each year, the state added between 100,000 and 200,000 individuals to the labor force. Between 2004 and 2005, the labor force increased by approximately 188,000 individuals. This was the largest annual increase over the 4-year period. California's total labor force exceeded 17.7 million in 2005.

While increases in the state's total labor force have been relatively consistent, the state's unemployment rate has fluctuated slightly since 2000. As shown in Figure 1-3, the state's unemployment rate was lowest in 2000 (5.0 percent), increased steadily over the subsequent 3 years (to 6.8 percent in 2003), and has been declining since. The unemployment rate was 5.4 percent in 2005, equal to the state's 2001 rate. This decrease in the unemployment rate at the state level coincided with similar national employment trends.

Overall, unemployment rates generally tend to be lower in urban areas than in rural areas of the state; however, high unemployment rates are often also found in low-income neighborhoods of major urban centers.

Business and Industry

California's economy is a robust, dynamic mix of industries that addresses the wide range of needs created by the large population of the state. In 2005, the largest nonfarm industries included trade, transportation, and utilities, professional and business services, and government services. Established industries near the project study areas display a similar mix of prominent business types, but also contain some variation between the two counties of the primary study area. Understanding geographic variations and prominent industry types within the study areas allows for the identification of important influences on the local and regional economy.

This section describes the industrial makeup and major employers within the study areas that could be affected by the project. The analysis of the primary study area focuses on Shasta and Tehama counties, because of the limited economic data available for their constituent cities. Because employees often travel substantial distances to their place of work, aggregating data at the county level effectively captures the economic activities of a region. As in other sections, the analysis of the extended study area speaks more generally about business and industry characteristics of the broader region.

Primary Study Area

Because of the area's limited urban development and substantial amount of open space, the economy in the area near Shasta Dam has historically been dependent on natural resources for its livelihood. As a result of the increased urbanization occurring throughout California in the last decade and changes in the global marketplace, the economic focus in many communities has been shifting. Based on state economic projections for the next 5–10 years, the trend is expected to continue, with service-related industries replacing resource-related industries as the drivers of the regional and state economy. Although statewide trends are expected to influence economic activities in communities near Shasta Dam, the influence will not be as substantial as observed in other areas.

There are two useful ways to characterize the business and industry activities of a given area: industrial makeup and major employers. A description of industrial makeup provides an aggregate depiction of the types of industries that are established within an area, while identifying major employers illustrates which types of businesses are most successful and represent major employment opportunities for the people of the area. Each of these topics is addressed below for Shasta and Tehama counties.

Industrial Makeup Economic activities in the primary study area coincide in many ways with the industrial composition of the state as a whole, but they do vary in some respects. As shown in Table 1-9, trade, transportation, and utilities and then governmental services made up the top two industrial sectors (in terms of employment) at both the local and state levels in 2002. In Shasta and Tehama counties, government employees and employees in the trade, transportation, and utilities sectors account for more than 20 percent of the total workforce.

Table 1-9. Industrial Makeup in Shasta and Tehama Counties, 2002

Industry Croup		ge of Total Enk in parenthes	
Industry Group	Shasta County	Tehama County	State of California
Trade, Transportation, and Utilities	21.0	24.3	18.8
	(1)	(2)	(1)
Government	20.5	24.8	16.9
	(2)	(1)	(2)
Educational and Health Services	16.2	11.1	10.4
	(3)	(4)	(5)
Leisure and Hospitality	10.1	7.6	9.6
	(4)	(5)	(6)
Professional and Business Services	9.1	5.4	14.6
	(5)	(6)	(3)
Manufacturing	5.2	14.9	11.3
	(7)	(3)	(4)
Total Farm Employment (% of total workforce)	1,000	1,430	372,700
	(1.6)	(7.4)	(2.5)

Source: EDD 2007a, 2007b, 2007c,

Notes:

All industry data are from 2002.

Similarly, educational and health services, which includes teachers and health workers, also ranks in the top five industries in both counties and California generally. In all three jurisdictions, educational and health services provide more than 10 percent of employment. Leisure and hospitality, including accommodations, restaurants, and the like, registers in the top five industries in Shasta and Tehama counties (Table 1-9). In Shasta County, more than 10 percent of the workforce is employed in this industry.

There are a number of similarities in the industrial makeup of the two counties and the state, but there are also some differences. For example, manufacturing plays an important role in Tehama County (14.9 percent) and the state of California (11.3 percent) as a whole, but a comparatively small role in Shasta County (Table 1-9). Professional and business services registers as the third largest industry at the state level (14.6 percent), but represents a smaller portion of employment in Shasta County (9.1 percent) and Tehama County (5.4 percent). Additionally, as shown at the bottom of Table 1-9, farm employment makes up a sizeable portion of the total workforce in Tehama County (7.4 percent), but accounts for a comparatively small portion of Shasta County (1.6 percent) and the state's total workforce (2.5 percent).

¹ Percentage of nonfarm employees

Projections of future growth depict slightly different economic trends in Shasta and Tehama counties than at the state level. As shown in Table 1-10, the state's professional and business industry is expected to grow by almost 30 percent by 2014 (compared to 2004 levels) and the educational and health services industry is expected to grow by more than 25 percent in that time. These industries also represent the top two growth industries in Shasta County as well, but growth rates are expected to be slightly less in the county (24 percent and 22 percent, respectively). Educational and health services and professional and business services represent the fourth and fifth largest growth industries in Tehama County. The construction industry, the state's third largest growth industry, is expected to be the largest growth industry in Tehama County; however, it does not rank in the top growth industries in Shasta County. In both Shasta County and the state as a whole, the leisure and hospitality industry is expected to grow by more than 17 percent, but it is not in the top growth industries of Tehama County (Table 1-10). Expected increases in leisure and hospitality–related industries will most likely be related to increased tourism in the primary study area (specifically, Shasta County). Additionally, information-related industries (e.g., publishing) are expected to grow substantially (20.5 percent) in Tehama County and the state (18.0 percent). Employment increases in governmental agencies (18.0 percent and 14.2 percent, respectively) and "other" service industries (16.0 percent and 17.0 percent) are also projected for Shasta and Tehama counties, respectively.

Table 1-10. Projected Growth Industries in Shasta and Tehama Counties

Shasta County ¹	Tehama County ²	State of California ¹		
Professional and Business Services (24.2%)	Construction (23.7%)	Professional and Business Services (28.7%)		
Educational and Health Services (22.0%)	Information (20.5%)	Educational and Health Services (25.1%)		
Government (18.0%)	Other Services (Combined) (17.0%)	Construction (19.1%)		
Manufacturing (17.9%)	Educational and Health Services (16.0%)	Leisure and Hospitality (18.9%)		
Leisure and Hospitality (17.2%)	Professional and Business Services (15.1%)	Information (18.0%)		
Other Services (Combined) (16.0%)	Government (14.2%)	Wholesale Trade (17.1%)		

Sources: EDD 2007a, 2007b, 2007c, 2007d

Notes:

Projected change in parentheses

¹ Growth projections for Shasta County and California from 2004 to 2014.

² Growth projections for Tehama County from 2002 to 2012.

Major Employers Established businesses, along with new business that locate in the area, will play an important role in the expansion of the local economy projected by the State. Table 1-11 displays a number of the major employers in the primary study area. This list of employers includes a range of businesses with a payroll of over 500 people. Three of the nine businesses provide health care to local residents. Other employers include a wholesale distribution center, a wholesale nursery, and a manufacturer of industrial materials (mill work).

Extended Study Area

As would be expected from areas as large as the two subareas of the extended study area, the business and industrial makeup of the two subareas represent a sizeable range of industry types. While this is true, unique characteristics and components can be identified in both subareas. Trends in business and industry for each are discussed below.

Table 1-11. Major Employers in Shasta and Tehama Counties, 2005

Employer	Location	Industry	Size Category	
Mercy Medical Center	Shasta County	Hospital	Over 1,000	
Lassen Canyon Nursery	Shasta County	Nursery, Wholesale	Over 1,000	
Mercy Medical Center- Redding	Shasta County	Hospital	Over 1,000	
Walmart	Tehama County	Distribution Centers (Wholesale)	Over 1,000	
Clark Pest Control	Shasta County	Pest Control	Over 500	
Shasta College	Shasta County	Universities & Colleges	Over 500	
Oakdale Heights Management	Shasta County	Fuel Management	Over 500	
Shasta Regional Medical Center	Shasta County	Hospital	Over 500	
Sierra Pacific Industries	Tehama County	Millwork (Manufacturers)	Over 500	

Source: EDD 2007d, 2007e

Lower Sacramento River and Delta Business and industry in the counties of the lower Sacramento River and Delta portion of the extended study area is composed primarily of five industries: government; trade, transportation, and utilities; educational and health services; professional and business services; and leisure and hospitality. These five industries consistently rank in the top five industries of the nine counties of the lower Sacramento River and Delta portion of the extended study area (Table 1-12). For example, government workers represent the leading or second-ranked industry (in terms of employment) in all nine counties. Similarly, the trade, transportation, and utilities industry ranks in the top three industries of all nine counties; of these, it registers as the third-ranked industry in only two counties (Colusa and Glenn counties). The leisure and hospitality industry is another common industry in the nine-county area. In

only Contra Costa and San Joaquin counties did the leisure and hospitality industry not rank as one of the top five industries. Similarly, the education and health services industry ranked in the top five industries of all but two counties (Colusa and Glenn counties). Agriculture ranked as a top industry in only three counties: Colusa, Glenn, and Sutter counties (Table 1-12). Agriculture was Colusa County's top industry in 2006. Manufacturing ranked as a top-five industry in four of the nine counties, but consistently made up less than 10 percent of all employees in the county. This overall industrial makeup is similar to that observed at the state level, shown in Table 1-10.

Table 1-12. Top Five Industries (Employees by Industry) in Counties of the Lower Sacramento River and Delta¹

County								
Butte	Colusa	Contra Costa	Glenn	Sacramento	San Joaquin	Solano	Sutter	Yolo
Government (22.3%)	Agriculture (30.0%)	Trade, Transportation, & Utilities (18.7%)	Government (31.3%)	Government (25.2%)	Trade, Transportation, & Utilities (22.5%)	Trade, Transportation, & Utilities (21.0%)	Government (26.2%)	Government (25.2%)
Trade, Transportation, & Utilities (18.6%)	Government (26.4%)	Government (17.4%)	Agriculture (19.1%)	Trade, Transportation, & Utilities (16.9%)	Government (17.7%)	Government (19.6%)	Trade, Transportation, & Utilities (18.9%)	Trade, Transportation, & Utilities (16.9%)
Educational & Health Services (16.5%)	Trade, Transportation, & Utilities (14.7%)	Professional & Business Services (14.8%)	Trade, Transportation, & Utilities (19.0%)	Professional & Business Services (11.7%)	Educational & Health Services (11.6%)	Educational & Health Services (12.3%)	Educational & Health Services (11.9%)	Professional & Business Services (11.7%)
Leisure & Hospitality (9.9%)	Manufacturing (9.6%)	Educational & Health Services (11.6%)	Leisure & Hospitality (7.7%)	Educational & Health Services (10.1%)	Manufacturing (9.7%)	Construction (16.0%)	Agriculture (9.9%)	Educational & Health Services (10.1%)
Professional & Business Services (7.4%)	Leisure & Hospitality (8.5%)	Manufacturing (9.3%)	Manufacturing (7.5%)	Leisure & Hospitality (9.4%)	Professional & Business Services (8.4%)	Leisure & Hospitality (9.9%)	Leisure & Hospitality (8.1%)	Leisure & Hospitality (9.4%)

Sources: EDD 2007f, 2007g, 2007h, 2007i, 2007j, 2007k, 2007l, 2007m

Notes: Percent of total employees in parentheses.

CVP/SWP Service Areas Business and industry trends for the CVP and SWP service areas are assumed to be equal to those at the state level because of the expanse of these service areas. In discussions of the primary and extended study areas above, state-level information has frequently been used as baseline information for comparison. Therefore, this section provides a brief summary of the industrial makeup of the state of California.

¹ All data from 2006.

The trade, transportation, and utilities industry represents the largest industry, measured by total employees, in California. This industry provided almost 19 percent of the jobs in 2002. As in the lower Sacramento River and Delta portions of the extended area, government employees comprise the second largest industry in the state and the professional and business services, educational and health services, and leisure and hospitality industries all play a significant role in the state's economy (Table 1-10). Manufacturing (ranked fourth) rounded out the state's top six industries in 2002. Three of these industries – professional and business services, educational and health services, and leisure and hospitality – are all expected to be growth industries in the state (Table 1-10). Construction, information technology, and wholesale trade are also expected to be growth industries in the state.

In 2002, the agricultural industry provided approximately 373,000 jobs (2.5 percent) to California residents. Recently, agriculture-related jobs have declined over time in California relative to other types of jobs, as agricultural areas have been converted to urban land uses. However, the agricultural industry and that portion of the service industry that serves agricultural enterprises still represent a major source of employment within the service areas of the CVP's agricultural water contractors. Construction, retail, and other types of service industry businesses also provide notable job opportunities.

Government and Finance

In rural areas, such as those near Shasta Dam, local governments provide a wide range of services. Using a mix of funding sources, local officials allocate financial resources for diverse activities, including the provision of police and public safety, development review, and educational services within their jurisdictions. The two largest sources of revenue for most local jurisdictions are property taxes and funding from the Federal and State governments. These two sources provide a relatively stable revenue base for funding local programs. Public health and safety and social services of various forms represent the two biggest expenditures at the local level. These programs serve as a safety net for the local population and are frequently the most visible local programs.

This section provides background information on recent trends within the study areas. The discussion of the local governments in the primary study area focuses on Shasta and Tehama counties, because of the limited economic data available for their constituent cities. In many cases, cities and towns work with and share funding with their appropriate county governments. Consequently, county data provide an adequate amount of detail for the area. The analysis of the extended study area speaks more generally about local governments and their finances.

A total of 58 county governments and 478 incorporated cities operate within California's borders. Each of these counties and cities must develop mechanisms for successfully funding the numerous programs mentioned above. Individual jurisdictions face different challenges depending upon their population makeup and special needs. Local governments in urban areas often

address substantially different issues than their rural counterparts. Within the project's study areas, rural jurisdictions (both counties and cities) predominate.

Primary Study Area

Shasta and Tehama counties are the critical local governments in the primary study area. As discussed above, these counties contain almost 180,000 people and 61,000 people, respectively. Each county maintains one primary urban center—Redding in Shasta County and Red Bluff in Tehama County—with a limited number of small cities and towns and large amounts of rural land surrounding it. Because the two counties are largely rural jurisdictions, total revenues and expenditures in both counties are relatively low when compared to other jurisdictions in the state. Similarly, expenditures in each jurisdiction are tailored to rural needs more than might be seen in other California jurisdictions.

Shasta County As one of the larger counties in the northern Central Valley (although still predominantly rural), Shasta County provides a wide range of services to its almost 180,000 residents. To meet residents' needs, Shasta County employs a number of funding mechanisms, including property taxes, Federal and State funding, permit fees, and other sources (Table 1-13).

Through these various means, Shasta County accumulated more than \$326.8 million in total revenues in the 2009–2010 fiscal year. This total represented an increase of 4.2 percent over 2007–2008 fiscal year revenues (\$313.2 million). In that 3-year period, Shasta County's total revenues steadily increased each year. In the 2009 – 2010 fiscal year, the largest source of revenue was Federal and State funding, with more than \$195.5 million. Property taxes represented another largest revenue source for Shasta County, at more than \$39.2 million. Revenues from other taxes decreased substantially as a result of the expiration of the sales tax on gas established under Assembly Bill 2928 and the sales and use tax established under Proposition 172 (Table 1-13).

Revenues generated by Shasta County are used for a range of governmental activities. Expenditures increased from \$302.8 million in the 2007–2008 fiscal year to \$319.7 million in the 2008–2009 fiscal year. Expenditures decreased substantially in the 2009–2010 fiscal year to \$309.6 million as a result of decreased spending on transportation-related projects. Table 1-13 displays the total expenditures for Shasta County in several categories. Welfare, social services, and other public assistance has consistently been the largest expenditure for Shasta County (more than \$94.1 million in 2010), but remained relatively constant between 2007 and 2010. Police, fire, and other public safety activities represented the second largest expenditure category with more than \$79.7 million in the 2009–2010 fiscal year. Public health and medical expenses by Shasta County decreased from \$54.0 million in the 2007–2008 fiscal year to \$50.2 million in the 2009–2010 fiscal year (Table 1-13). Overall, total expenditures were less than total revenues in the 2007–2008 and 2009–2010 fiscal years and total expenditures exceeded total revenues in the 2008-2009 fiscal year (Table 1-13).

Table 1-13. Revenues and Expenditures in Shasta County – Selected Years, 2007 – 2010

	Revenue	Revenues and Expenditures (\$)			
	2007 – 2008	2008 – 2009	2009 – 2010		
Revenues					
Property Taxes	37,220,753	36,500,000	39,289,632		
Other Taxes	26,241,822	24,319,631	8,058,346		
Licenses, Permits, Fines, Forfeitures, Etc.	13,042,326	9,124,996	9,947,984		
Federal, State, Other	177,600,834	168,364,818	195,502,701		
Charges for Other Services	18,119,305	18,660,914	18,804,323		
Total Miscellaneous Revenue	5,745,962	7,746,234	4,572,393		
All Other Financing Sources	35,3024,69	48,018,344	50,663,360		
Total Revenue	313,273,471	313,570,336	326,838,739		
Expenditures					
Legislative and Administrative, Finance, and Counsel	52,700,253	59,538,465	53,081,487		
Capital Projects	2,190,007	1,554,900	5,557,696		
Police Protection, Corrections, Fire, Etc.	79,777,591	77,945,091	79,752,968		
Transportation, Airport, Etc.	23,230,342	29,082,383	20,821,075		
Public Health, Medical Care, Etc.	54,013,214	52,565,588	50,276,031		
Welfare, Social Services, and Other Public Assistance	88,680,070	92,780,628	94,111,145		
Total Education	1,769,668	1,519,566	1,404,193		
Total Recreation Facilities	246,240	336,902	206,798		
Costs Associated with Long-Term Debt (Principal and Interest)	281,271	4,384,869	4,403,904		
Total Expenditures	302,888,656	319,708,403	309,615,298		

Sources: Shasta County 2010, 2011

Tehama County Because of its smaller size, Tehama County's total revenues are substantially less than those of Shasta County (\$112.3 million in the 2009–2010 fiscal year, compared to \$309.6 million in Shasta County), but Tehama County experienced an overall decrease in revenue growth between 2007 and 2010. In that 3-year period, Tehama County's total revenue decreased from \$119.5 in the 2007–2008 fiscal year to \$112.3 in the 2009–2010 fiscal year, or 5.9 percent (Table 1-14). Federal and State funding sources made up the largest revenue source in the 2009–2010 fiscal year, with more than \$60.8 million directed to Tehama County. As seen in Shasta County, property taxes represent another significant revenue source (\$11.1 million in the 2009–2010 fiscal year).

As shown in Table 1-14, expenditures in Tehama County consistently decreased from \$119.3 million in the 2007–2008 fiscal year to \$115.1 million in the 2009–2010 fiscal year, or 3.3 percent (Table 1-14). The top two expenditures in Tehama County in the 2009–2010 fiscal year were welfare and social service programs (\$38.0 million) and police, fire, and other public safety programs (\$39.2 million). Spending on these programs and services and on public health and medical care stayed relatively constant over the 3-year period; costs for

recreation facilities increased, and costs for legislative and adminstration services, transportation, education, and long-term debt decreased. Total expenditures were less than total revenues in the 2007 - 2008 and 2008 - 2009 fiscal years but exceeded total revenues in the 2009 - 2010 fiscal year.

Table 1-14. Revenues and Expenditures in Tehama County – Selected Years, 2007–2010

	Revenues and Expenditures (\$)			
	2007–2008	2008–2009	2009–2010	
Revenues				
Property Taxes	11,242,604	11,926,296	11,168,646	
Other Taxes	10,866,483	10,117,708	9,616,021	
Licenses, Permits, Fines, Forfeitures, Etc.	6,416,739	5,582,963	4,837,382	
Federal, State, Other	66,250,338	63,756,606	60,800,918	
Charges for Other Services	9,584,768	8,887,405	11,255,754	
All Other Financing Sources	15,139,823	16,783,896	14,677,058	
Total Revenue	119,500,756	117,054,874	112,355,779	
Expenditures				
Legislative and Administrative, Finance, and Counsel	11,749,170	9,499,314	8,394,648	
Police Protection, Corrections, Fire, Etc.	37,301,513	38,831,321	39,023,179	
Transportation	14,531,455	11,336,957	11,366,314	
Public Health, Medical Care, Etc.	15,719,072	16,534,164	16,746,876	
Welfare, Social Services, and Other Public Assistance	36,666,298	38,595,415	38,036,675	
Total Education	629,736	705,431	660,541	
Total Recreation Facilities	217,948	230,836	239,426	
Costs Associated with Long-Term Debt (Principal and Interest)	2,217,464	963,899	681,531	
Total Expenditures	119,035,656	116,697,337	115,149,190	

Sources: Tehama County 2010, 2011

Extended Study Area

Government and finance within the extended study area is managed by the nine counties in the lower Sacramento River and Delta portion of the extended study area and by the 58 California counties and their constituent cities and towns, as described below.

Lower Sacramento River and Delta The lower Sacramento River and Delta portion of the extended study area comprise nine primary counties—Butte, Colusa, Contra Costa, Glenn, Sacramento, San Joaquin, Solano, Sutter, and Yolo counties. A total of 55 cities and towns and a range of special districts are

located within these nine counties. This collection of governmental entities provides valuable public services to the lower Sacramento River and Delta area—education, fire protection, employment development, emergency services, and crime prevention and control. These agencies and special districts rely primarily on tax revenue disbursed by State government, local sales and property taxes and fees, and the disbursement of Federal funds. With the passage of Propositions 13 and 165 in the 1970s and 1980s, the providers of services at the local level have come to depend heavily on existing tax structures and rates that generate revenue from economic activity and property values, as opposed to relying upon tax increases or new types of taxes and fees. This greater reliance on existing tax structures and rates, and a productive economic base, makes relatively reliable and affordable CVP and SWP water and power even more valuable; its availability and affordability helps foster local business activity and thus indirectly helps sustain the fiscal health of local service providers. Similarly, flood protection provided by Shasta Dam also helps protect and sustain the appraised value of property within the dam's floodplain, again helping to protect the fiscal health of local service providers.

Total revenues and expenditures vary substantially between the nine counties of the lower Sacramento River and Delta portions of the extended study area because of the relative sizes of the counties and the services they provide. Revenues include payments received through taxes, licenses and permits, grants from other governments, charges for services, and others. Expenditures include payments made by a jurisdiction to buy goods, pay its employees, and provide services to its residents. Revenues and expenditures range from the approximately \$65 million budgeted in Glenn County for 2006–2007 to Contra Costa County's approximately \$1.2 billion budget (Glenn County 2006; Contra Costa County 2006).

CVP/SWP Service Areas The State of California represents the most appropriate level of detail for the CVP and SWP service areas because of the expanse of the service areas and the interdependent nature of government and finance provision. Therefore, this section provides a brief summary of the government and finance characteristics of the state as a whole.

California currently ranks as the seventh largest economy in the world and provides goods and services to more than 37 million people. As a result, State government manages a large annual volume of revenues and expenditures. The State of California's proposed 2011–2012 budget includes a total of approximately \$123 billion in revenues and transfers and a total of more than \$127 billion in total expenditures (State of California 2011). Many of the State's expenditures represent grants and other funding made available to local jurisdictions throughout California. These funds may be used for a variety of services, such as health and human services, environmental protection, resource management.

Regulatory Framework

The assessment of socioeconomic resources is guided primarily by Federal laws and policies. State and local laws and policies typically promote economic development and diversity, environmental justice, public health and safety, housing, and other concerns of the residents within their jurisdictions. As noted below, National Environmental Policy Act (NEPA) documents must include an assessment of potential conflicts with state and local plans and policies.

Federal

The major Federal laws and regulations guiding the assessment of socioeconomic resources are summarized below.

National Environmental Policy Act

Section 102 of NEPA requires Federal agencies to "insure the integrated use of the natural and social sciences" in planning and decision making (42 U.S. Code (USC) Section 4332).

Section 1502.16(c) of NEPA requires Federal agencies to identify potential conflicts between a proposed action and related plans and policies of Federal, state, and local agencies and Indian tribes. This requirement helps Federal agencies identify potential conflicts that may cause adverse effects on the social and economic environment of a study area because many agency and tribal plans and policies are designed to protect the people residing within their jurisdictions and/or the local economy they depend upon for their economic livelihoods.

Council on Environmental Quality

The Council on Environmental Quality's "Regulations for Implementing the Procedural Provisions of NEPA" (40 Code of Federal Regulations (CFR) 1500–1508) provide guidance related to social and economic impact assessment by noting that the "human environment" assessed under NEPA is to be "interpreted comprehensively" to include "the natural and physical environment and the relationship of people with that environment" (40 CFR 1508.14). Furthermore, these regulations require agencies to assess "aesthetic, historic, cultural, economic, social, or health" effects, whether direct, indirect, or cumulative (40 CFR 1508.8). Some Federal agencies, including the U.S. Bureau of Land Management and U.S. Forest Service, have developed socioeconomics-related handbooks and instructional memoranda to help the preparers of environmental impact statements comply with NEPA with respect to socioeconomics resources.

Executive Order 12898—Environmental Justice

In 1994, President Bill Clinton issued Executive Order 12898 regarding environmental justice. This order requires Federal agencies to "identify and address" disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and

low-income populations in the United States. The Council on Environmental Quality issued guidance in 1997 to help Federal agencies incorporate environmental justice concerns into their NEPA procedures. Environmental justice issues are specifically addressed in Chapter 24, "Environmental Justice," of the EIS.

State

Most state and local governments have plans and policies intended to protect and expand the local and regional economies affecting the communities and residents within their jurisdictions. Some state and local plans and policies are also intended to promote public health and safety while minimizing conflicts between new development projects of all types; their associated traffic, air, and noise impacts; and the social environment within which local residents live and work. State plans and policies also frequently address other social and economic impact topics, including fiscal conditions and related public services that affect local residents' quality of life.

The California Environmental Protection Agency adopted its own environmental justice policy in 2004. Pursuant to Sections 71110–71113 of the California Public Resources Code, the agency has developed this policy (or strategy) to provide guidance to its resource boards, departments, and offices. It is intended to help achieve the State's goal of "achieving fair treatment of people of all races, cultures and incomes with respect to the development, adoption, implementation and enforcement of environmental laws and policies."

Regional and Local

Each of California's counties, including Shasta and Tehama counties, as well as some State agencies, have plans, ordinances, and other policies designed to protect and improve a wide range of socioeconomic conditions, including housing, employment opportunities for minorities and low-income populations and others, economic diversification, and business activity in general.

Shasta County

Shasta County General Plan Two primary elements of the *Shasta County General Plan* (Shasta County 2004) address socioeconomic resources: Housing and Economic Development. The Housing Element of the *Shasta County General Plan* establishes several goals and policies related to ensuring adequate housing provision, especially affordable housing, in the county. Shasta County's housing policies and programs are grouped into six primary categories, each supporting an identified goal. These categories and the goal associated with each are listed below.

Housing Supply

- **Goal** - To establish and implement policies and programs that will:

- contribute to the provision of an adequate supply and diversity of safe, healthy, and affordable housing for all income levels to meet the needs of residents in the unincorporated areas of Shasta County.
- 2. satisfy the requirements of the Regional Housing Needs Allocation Plan for Shasta County for the 2003–2008 Housing Element period, specifically to realize the construction of new units as follows: Very Low Income—300 units; Low Income—255 units; Moderate Income—1,035 units; and Above Moderate Income—810 units.

• Conserve and Improve Existing Affordable Housing

Goal – To conserve, improve, and expand the inventory of existing affordable housing stock in the incorporated areas of the County, specifically to realize the conservation and/or rehabilitation of the following units: Rehabilitation (150): 60 units—Very Low Income; 55 units—Low Income; 25 units—Moderate Income; and 10 units—Above Moderate Income; Conservation (150): 90 units—Very Low Income; 53 units—Low Income; and 7 units—Moderate Income.

• Housing Development Constraints

Goal – To continue to remove all County constraints, as is practical
and legal, which have the potential to hinder or impede the
development of affordable housing projects.

Special Needs

Goal – To continue to work collectively with local agencies to enhance and expand the outreach programs designed to provide accessible and affordable housing, including supportive services, for those persons with special needs including the elderly, large families, single mothers, children, developmentally and physically disabled persons, the mentally ill, farmworkers, and the homeless.

• Energy Conservation

 Goal – To explore, implement, and promote energy conservation practices in all eligible existing and new housing projects.

• Fair Housing

Goal – To continue to utilize all feasible means to promote, expand, and ensure equal access to available, safe, decent, affordable housing opportunities in the unincorporated area without bias or prejudice for any reason for all economic segments of the County.

The Economic Development Element of the *Shasta County General Plan* (Shasta County 2004) establishes the following two overall objectives for economic development:

- ED-1 Economic development plans, programs, and policies shall contribute to a stable and healthy economy in Shasta County, which includes provision of a land development pattern, planning process, and regulatory atmosphere conducive to maintaining employment opportunities for County residents and fostering new economic development.
- **ED-2** Seek economic diversity that increases the variety, type and scale of business, industrial, and manufacturing activities.

To support these objectives, Shasta County has established three primary policies for implementation. These policies emphasize the reuse and revitalization of existing development and full use of existing infrastructure for new business opportunities. To attract business to Shasta County, a number of incentive programs are employed, including community development block grants, economic assistance through a county redevelopment agency, and business development and retention assistance through an economic development corporation. Additionally, a 50-square-mile State-defined enterprise zone (one of only 39 in the state) has been designated in portions of Redding, Shasta Lake, Anderson, and unincorporated Shasta County. Enterprise zones are generally designated in locations characterized by high poverty rates. Businesses locating within these areas may receive State-supported incentives such as sales and use tax credits, hiring assistance tax credits, and special business expense deductions (Shasta County 2004).

Tehama County

In the *Tehama County General Plan*, updated in 2009 (Tehama County 2009), Tehama County set out three "fundamental concepts" that relate to population growth and demographic shifts: (1) accommodating growth, but not limiting growth or accepting uncontrolled growth; (2) locating major growth along the Interstate 5 transportation corridor; and (3) organizing growth according to a range of community types. These concepts emphasize where Tehama County expects to locate new growth and how they plan to accommodate it. Specifically, the Interstate 5 corridor plays a significant role for the placement of new development, and Tehama County attempts to provide a range of housing types for the diversity of needs created within the community. This emphasis on housing diversity may become more crucial as aging residents' housing preferences change.

The following housing-related goals in the general plan are relevant to the project:

- Goal HE-3: Adequate Sites Ensure the provision of adequate sites and facilities to support future housing needs.
- **Goal HE-5: Housing Conservation** Work to improve, maintain and conserve the County's existing housing stock.

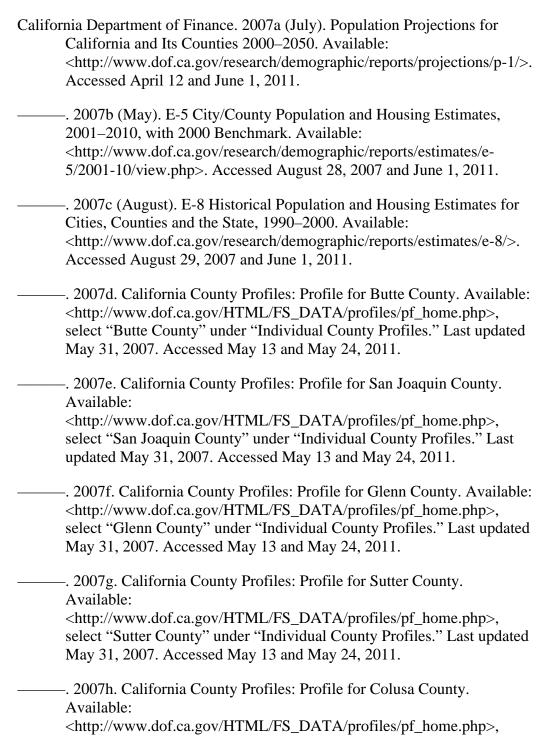
- Goal HE-6: Addressing Constraints Address and wherever possible remove, governmental constraints to the maintenance, improvement, or development of housing to meet the needs of County residents.
- Goal HE-7: Fair Housing/Equal Opportunity Promote equal housing opportunities for all persons without discrimination regardless of age, race, sex, marital status, ethnic background, household composition, sources of income, or other arbitrary factors.

Relevant economic development–related goals contained in the general plan are as follows:

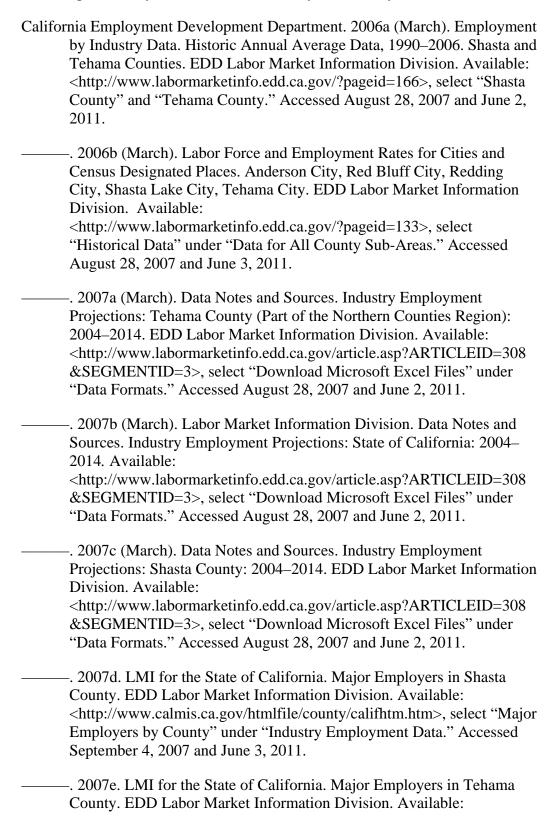
- **Goal ED-3** Expand the economic base while maintaining a healthy and diverse local economy that meets the present and future employment, shopping, recreational, public safety, and service needs of Tehama County residents.
- Goal ED-4 Work toward providing adequate infrastructure to support commercial, industrial, and recreational development within Tehama County including clean up of contaminated industrial sites.
- **Goal ED-7** Protect and enhance environmentally sensitive lands and natural resources while, at the same time, promoting business expansion, retention, and recruitment.

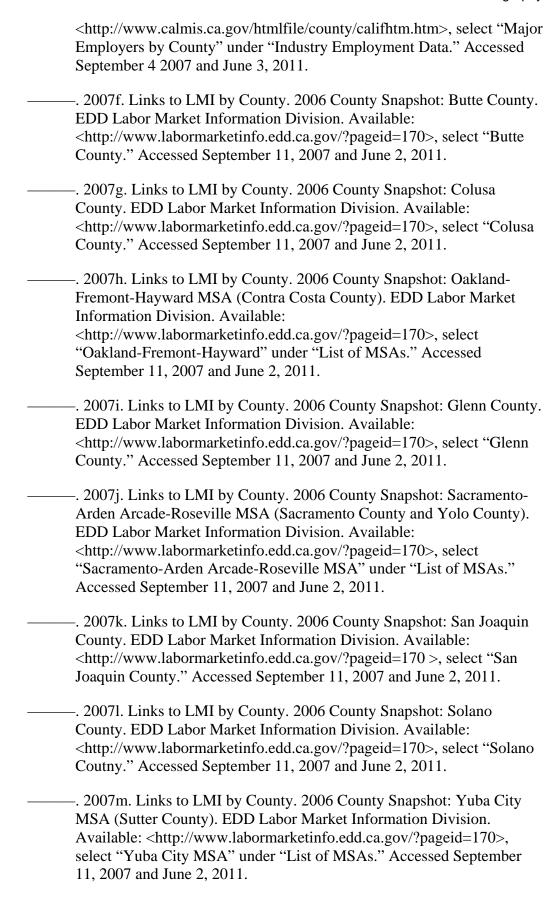
Shasta and Tehama counties function as the primary agencies responsible for implementing policies and programs aimed at addressing employment and labor force issues within the project's primary study area.

Chapter 2 Bibliography



select "Colusa County" under "Individual County Profiles." Last updated May 31, 2007. Accessed May 13 and May 24, 2011.





- Contra Costa County. 2006. County of Contra Costa Recommended Budget 2006–2007. Martinez, California.
- DOF. See California Department of Finance.
- EDD. See California Employment Development Department.
- Glenn County. 2006 (September 1). County of Glenn, State of California, Final Budget for the Fiscal Year 2006–2007. Published by the Glenn County Board of Supervisors. Willows, California.
- Shasta County. 2004 (September). Shasta County General Plan 2004. Redding, California.
- ———. 2010. Final Budget Fiscal Detail. Fiscal Year 2009–2010. Available: http://www.co.shasta.ca.us/index/cao_index/county_budgets/09-10_final_fiscal.aspx. Accessed May 13, 2011.
- ——. 2011. Final Budget Fiscal Detail. Fiscal Year 2010–2011. Available: http://www.co.shasta.ca.us/index/cao_index/county_budgets/2010-11AdoptedBudget-FiscalDetail.aspx. Accessed May 13, 2011.
- State of California. 2011. 2011–12 Governor's Budget Summary. Sacramento, California.
- Tehama County. 2009 (March). Tehama County General Plan Update 2009–2029. Red Bluff, CA. Prepared by PMC, Chico, California.
- ——. 2010. Adopted Budget Fiscal Year 2009–2010. Available: http://www.co.tehama.ca.us/index.php?option=com_content&view=article&id=164&Itemid=420. Accessed May 16, 2011.
- ——. 2011. Adopted Budget Fiscal Year 2010–2011. Available: http://www.co.tehama.ca.us/index.php?option=com_content&view=article&id=164&Itemid=420. Accessed May 16, 2011.
- U.S. Census Bureau. 2002a. Shasta County, California: Census 2000 Demographic Profile Highlights. American FactFinder Fact Sheet. Available:
 - ">, select "Shasta County, California." Accessed April 12, 2011.
- 2002b. California—Census 2000 Demographic Profile Highlights.
 American FactFinder Fact Sheet. Available:
 http://factfinder.census.gov/servlet/SAFFFacts?_event=Search&geo_id
 =05000US06089&>, select "California." Accessed April 12, 2011.

